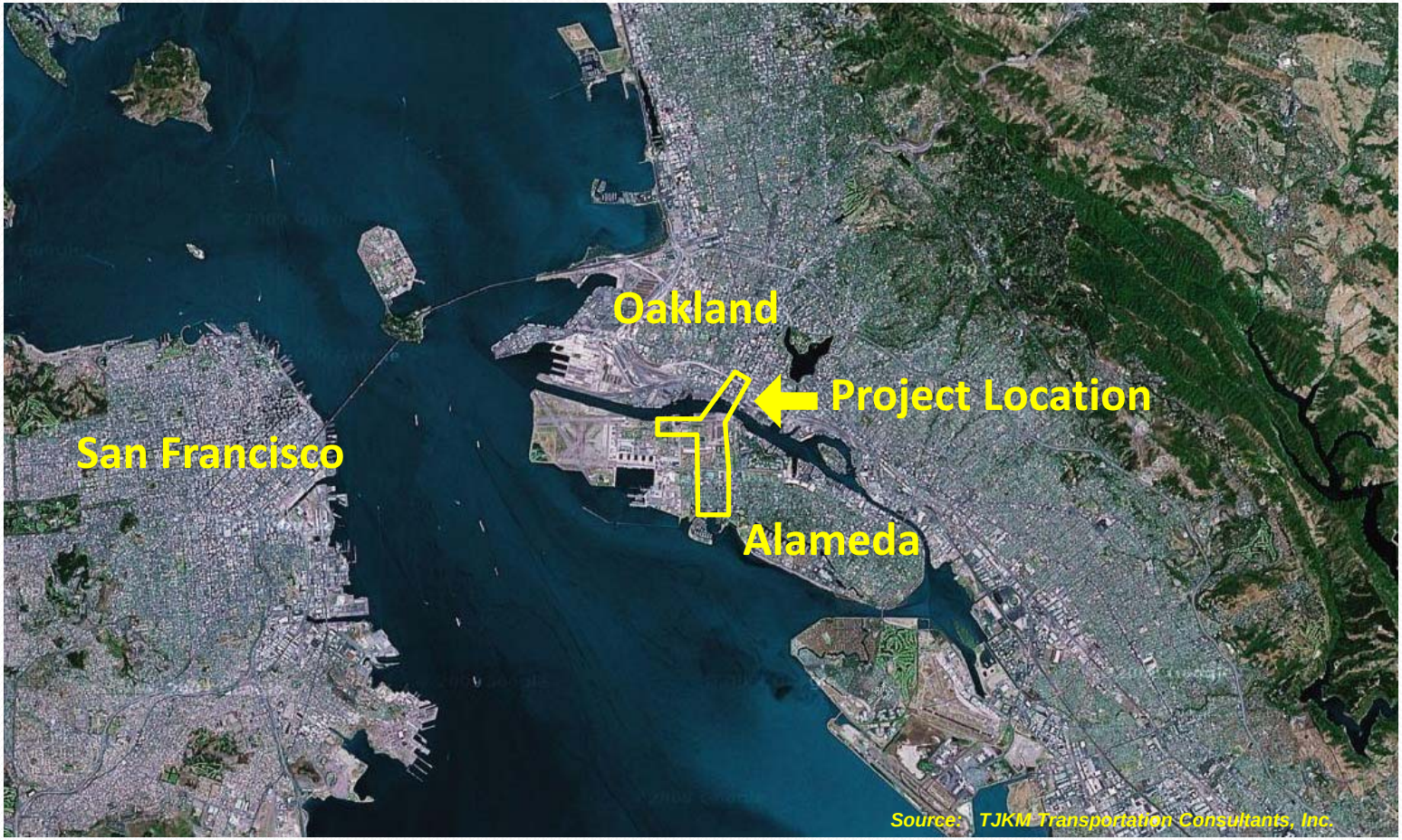
Webster Street SMART Corridor

Project Location



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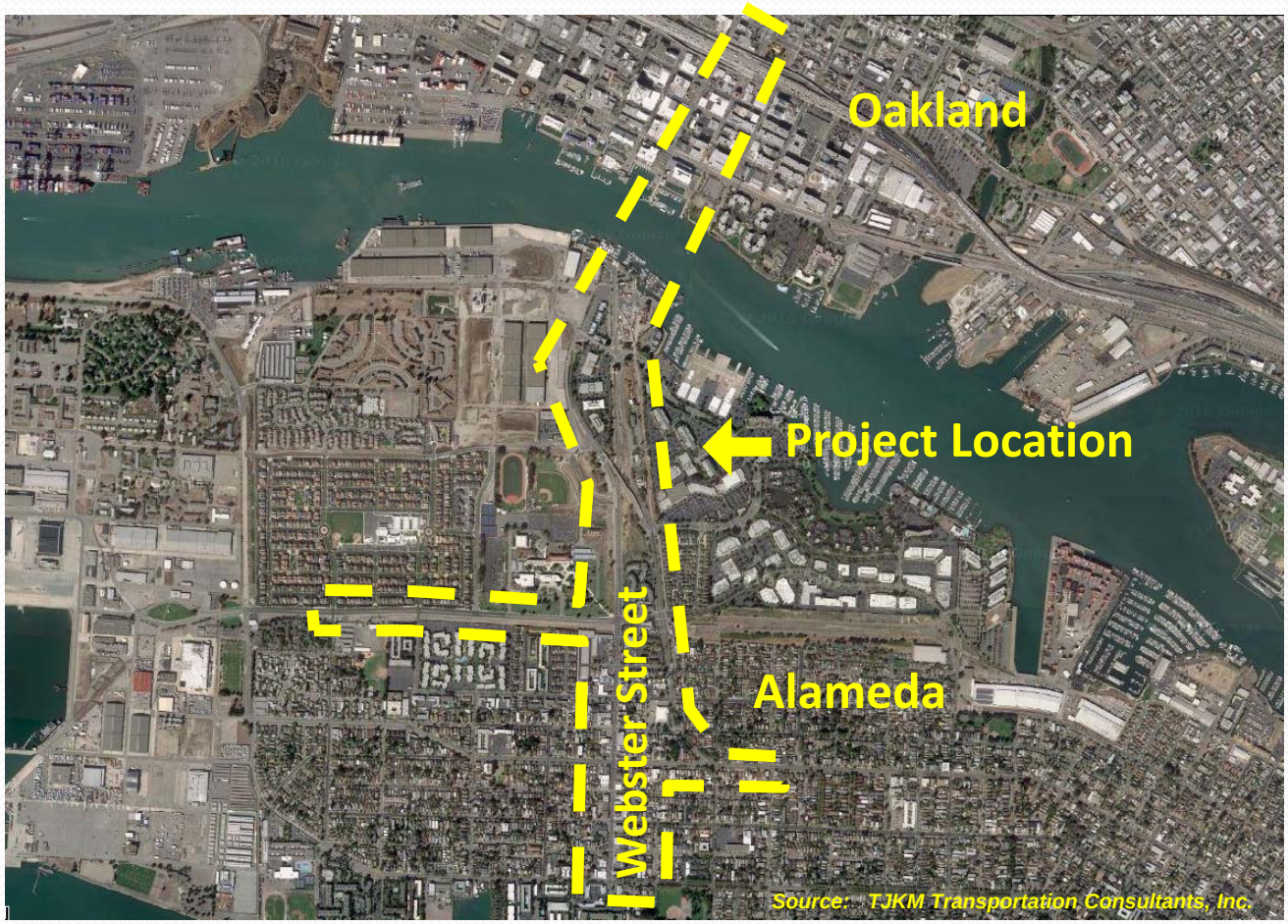


Project Partners

- Caltrans / CHP
- MTC
- ACTC (formerly ACCMA)
- AC Transit
- City of Oakland
- First Responders

Background

- Traffic Congestion – ADT 55 K, Queues, delays
- Incidents and First Responders Issues
- Travelers Information
- Transit Delays
- City goals to reduce GHGs

Project Description

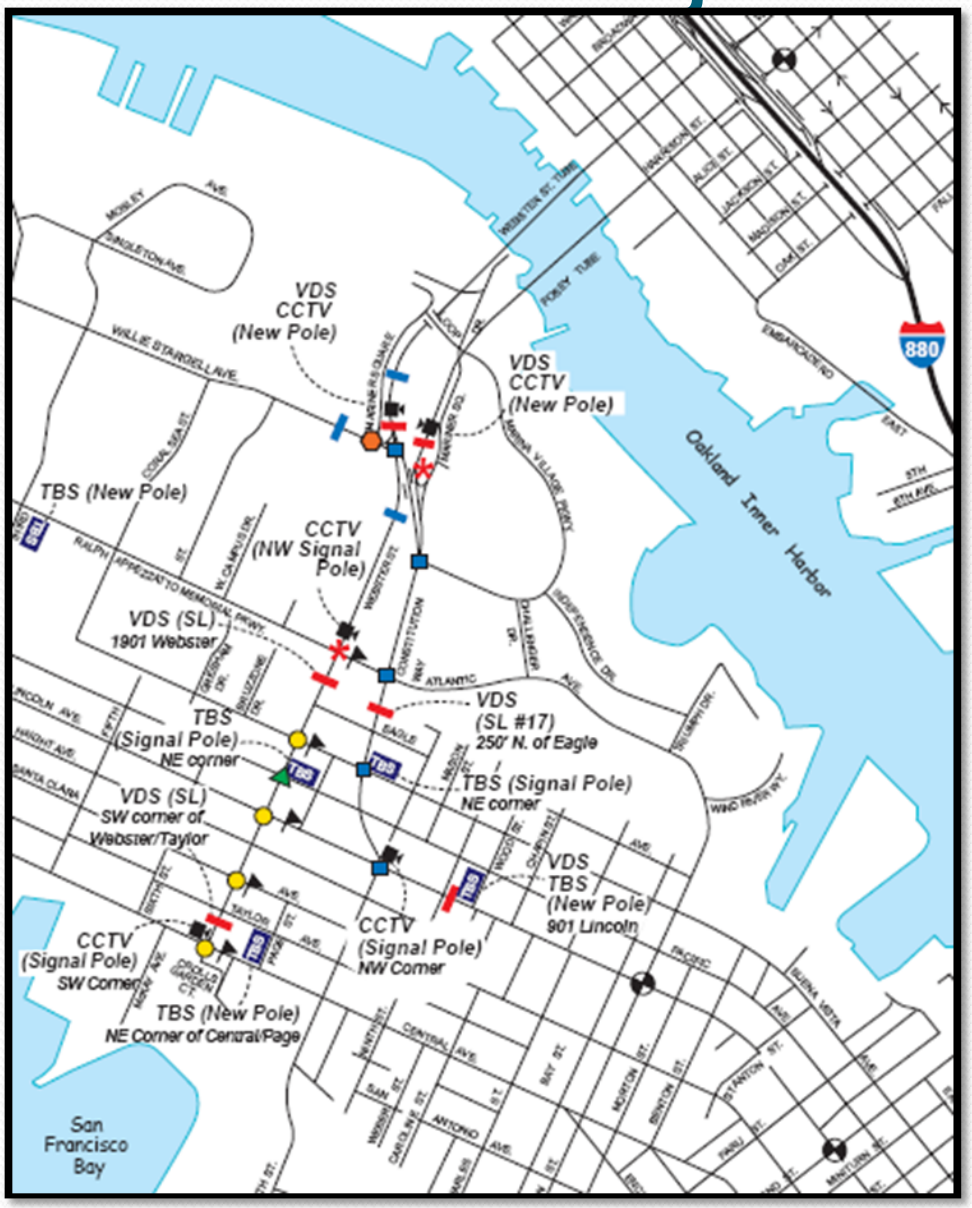
Webster Street Project is the Implementation of:

- New Traffic Signal at Webster and Pacific
- Real Time Traffic Monitoring
- Emergency Vehicle Preemption (EVP)
- Transit Signal Priority (TSP)
- Traffic Signal Synchronization to reduce GHGs
- Electronic Message Signs to improve safety in the tubes and incident management along Webster
- Inter-jurisdiction Communication in regards to Traffic Conditions

Project Goals & Benefits

- Improve traffic efficiency and safety through the use of Intelligent Transportation Systems (ITS).
- Improve air quality through the reduction of emissions by addressing traffic congestion and improving transit services
- Increase safety by enhancing emergency access, improving incident response, and providing traveler information.

Project Elements



LEGEND

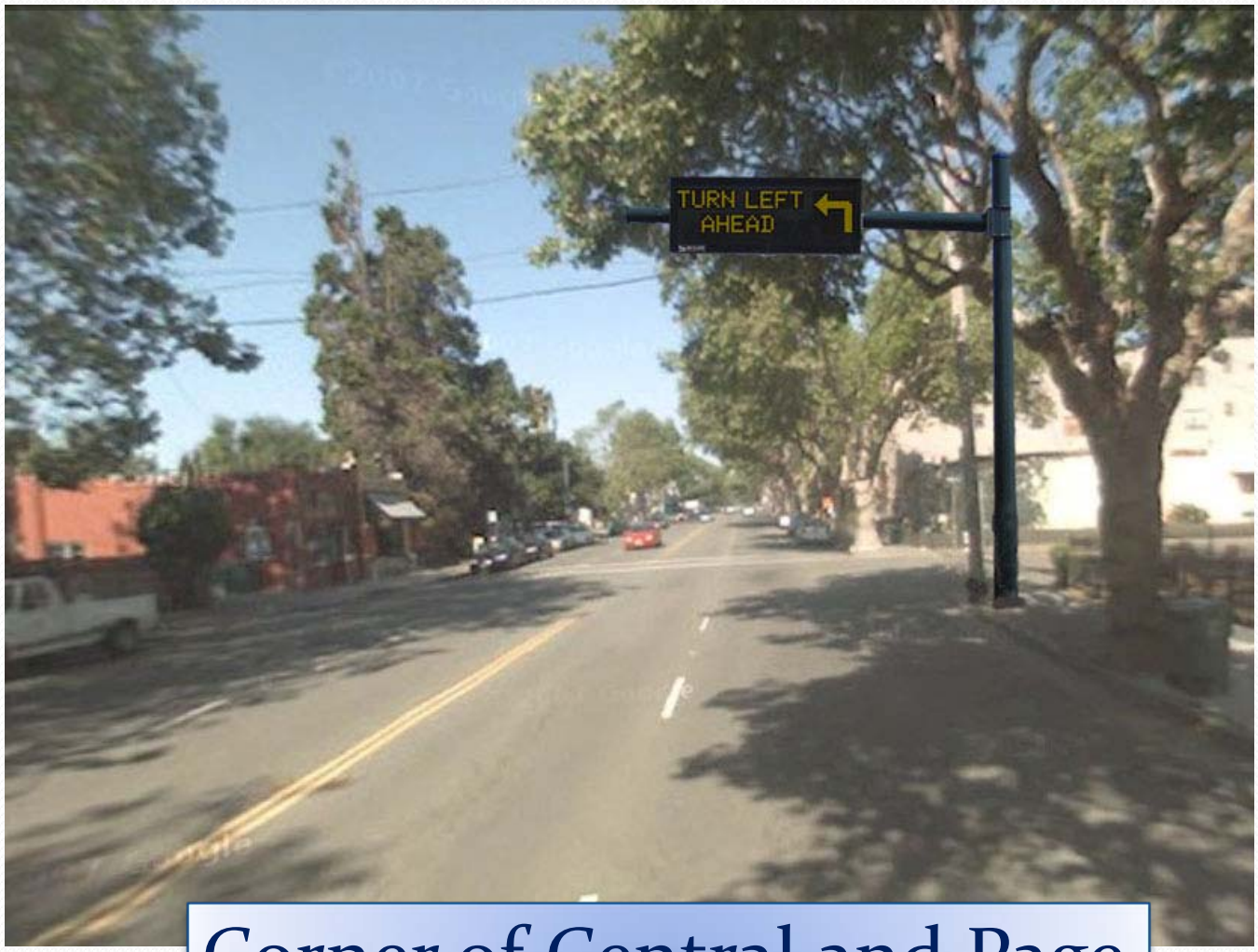
- Signal Designed with Existing Video Detection
- Signal under Construction with Loop Detection
- Signal with Existing Loop Detection
- Signal with No Detection
- Signal with Future Video Detection
- Proposed Signal with Video Detection
- City Furnished VDS
- Proposed VDS
- Proposed CCTV
- CMS Changeable Message Sign (CMS)
- Proposed Opticom
- Interconnect Overhead
- Interconnect Underground

Source: TJKM Transportation Consultants, Inc.

Message Sign at a Signal Example

Intersection of Constitution and Buena Vista

Standalone Message Sign Example



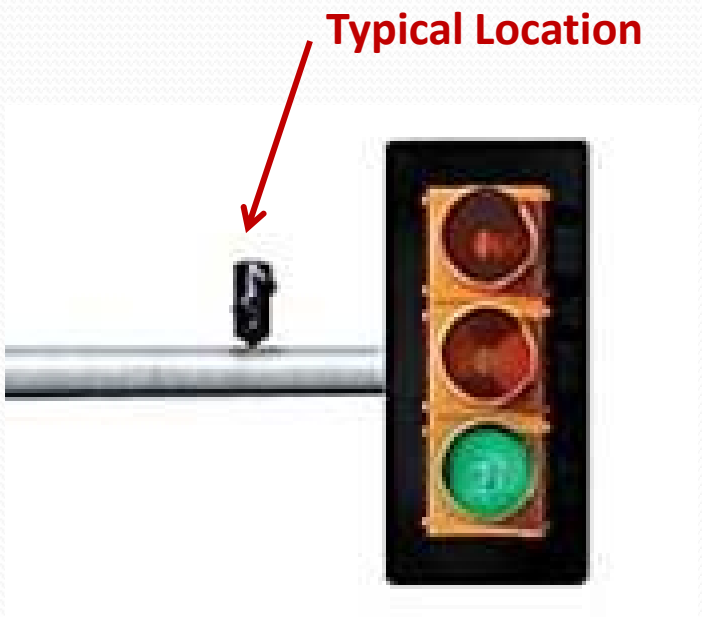
Corner of Central and Page

Traffic Monitoring Example

Webster Street & Atlantic Avenue

Transit and Emergency Services

- Fire Trucks will preempt traffic signal to improve incident response time just by driving through the intersection.
- Transit Buses will alter traffic signal phasing to improve Transit Operations.



Communication

- All installed field devices will be able to send data/images to the City of Alameda Public Works
- All data will also be accessible to the CHP, Police, Caltrans, City of Oakland, and the SMART Corridors Data Center

Source: FHWA/ACHD

Key Project Features

- Wireless Communication
  - Low Construction Cost
  - Low O&M Cost
  - Easily Expandable
- Video Encoding (H.264)
  - Low Bandwidth
  - Good Image Quality
- Opticom for double duty
  - EVP
  - TSP
- VIDS
  - Vehicle Detection
  - Real Time Monitoring
  - Adaptive Signal System
- Arterial Changeable Message Signs
  - Alternate Route Traveler Information
  - Major Event Route Guidance
- Mid-block Detection
  - Real time speed and volume
  - Real time validation & monitoring

QUESTIONS?

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